



## CROSS REFERENCE TO RELATED APPLICATIONS

This application claims rights under 35 U.S.C. 119(e) under U.S. Provisional Applications Serial No. 60/328,594; 60/328,603; and 60/328,617, all filed on October 10, 2001.

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APR 10 2003

### FIELD OF INVENTION

**OFFICE OF PETITIONS**

This invention relates to towed vehicles and more particularly to a compact system for deploying and retrieving towed decoys so that they can be redeployed multiple times.

### BACKGROUND OF THE INVENTION

As will be appreciated, aerial towed objects are used for a variety of purposes, including decoys, testing, and scientific investigations. In one embodiment, these decoys are used to draw various types of guided weapons away from an aircraft that the weapons are intended to destroy. As will be appreciated, these towed targets and decoys contain various types of electronic circuits to create an apparent target to a weapon to attract the weapon to the decoy rather than the aircraft. One active electronic device used in a decoy is a traveling wave tube amplifier to which high voltages must be applied to power the traveling wave tube. Additionally, other controls for the traveling wave tube or other electronics in the towed device are transmitted in one embodiment along a fiber optic transmission line, which is both frangible and fragile.

In the typical military operation, the decoys are sacrificed, meaning that the cables that attach the decoy to the deployment canister are severed after the decoy has been used.

The practice of cutting decoys after use and using them as an expendable commodity causes multiple problems. As a result it becomes important to be able to recover the towed vehicle itself, mainly because of the cost of the towed vehicle, as well as the fact that replacing towed vehicles often is difficult due to the long lead times in the manufacturing process and provision of such decoys.

For instance, typically a towed countermeasure decoy may cost as much as \$50,000 per decoy round. As many as eight decoys per sortie or mission can be deployed and as such, assuming